- 1. (Original) A method of producing a heterologous biological substance, comprising:
- (a) cultivating a mutant of a parent Aspergillus niger strain in a medium suitable for the production of the heterologous biological substance, wherein (i) the mutant strain comprises a first nucleotide sequence encoding the heterologous biological substance and one or more second nucleotide sequences comprising a modification of glaA and at least one of the genes selected from the group consisting of asa, amyA, amyB, prtT, and oah, and (ii) the mutant strain is deficient in the production of glucoamylase and at least one enzyme selected from the group consisting of acid stable alpha-amylase, neutral alpha-amylase A, and neutral alpha-amylase B, protease, and oxalic acid hydrolase compared to the parent Aspergillus niger strain when cultivated under identical conditions; and
 - (b) recovering the heterologous biological substance from the cultivation medium.
- 2. (Canceled).
- 3. (Canceled).
- 4. (Canceled).
- 5. (Canceled).
- 6. (Canceled).
- 7. (Original) The method of claim 1, wherein the biological substance encoded by the first nucleotide sequence is a biopolymer.
- 8. (Original) The method of claim 7, wherein the biopolymer is selected from the group consisting of a nucleic acid, polyamide, polyamine, polyol, polypeptide, and polysaccharide.
- 9. (Canceled).
- 10. (Canceled).
- 11. (Canceled).

- 12. (Original) The method of claim 1, wherein the biological substance encoded by the first nucleotide sequence is a metabolite.
- 13. (Canceled).
- 14. (Canceled).
- 15. (Original) The method of claim 1, wherein the mutant strain produces at least 25% less glucoamylase and one or more enzymes selected from the group consisting of acid stable alpha-amylase, neutral alpha-amylase A, and neutral alpha-amylase B, protease, and oxalic acid hydrolase compared to the parent *Aspergillus niger* strain when cultivated under identical conditions.
- 16. (Original) The method of claim 1, wherein the mutant strain is completely deficient in glucoamylase and at least one enzyme selected from the group consisting of acid stable alphaamylase, neutral alpha-amylase A, and neutral alpha-amylase B, protease, and oxalic acid hydrolase compared to the parent *Aspergillus niger* strain when cultivated under identical conditions.
- 17. (Original) The method of claim 1, wherein the mutant strain further comprises a modification of one or more genes which encode a proteolytic activity.
- 18. (Canceled).
- 19. (Original) The method of claim 1, wherein the mutant strain further comprises a modification of one or more genes encoding an enzyme selected from the group consisting of a carbohydrase, carboxypeptidase, catalase, cellulase, chitinase, cutinase, cyclodextrin glycosyltransferase, deoxyribonuclease, esterase, galactosidase, beta-galactosidase, glucose oxidase, glucosidase, haloperoxidase, hemicellulase, invertase, isomerase, laccase, ligase, lipase, lyase, mannosidase, oxidase, pectinolytic enzyme, peroxidase, phytase, phenoloxidase, polyphenoloxidase, ribonuclease, transferase, alpha-1,6-transglucosidase, transglutaminase, and xylanase.

sequer	nce encoding a heterologous biological substance and one or more second nucleotide
sequer	nces comprising a modification of glaA and at least one of the genes selected from the
group	consisting of asa, amyA, amyB, prtT and oah, wherein the mutant strain is deficient in
glucoa	mylase and at least one enzyme selected from the group consisting of acid stable alpha-
amylas	e, neutral alpha-amylase A, and neutral alpha-amylase B, protease, and oxalic acid
hydrola	ase compared to the parent Aspergillus niger strain when cultivated under identical
condition	ons.
21.	(Canceled).
22.	(Canceled).
	·
23.	(Canceled).
24.	(Canceled).
25.	(Canceled)
26.	(Original) The mutant strain of claim 20, wherein the biological substance encoded by
the first nucleotide sequence is a biopolymer.	
07	·
27.	(Canceled).
00	(On mondod)
28.	(Canceled).
20	(Canceled).
29.	(Canceled).
30.	(Original) The mutant strain of claim 20, wherein the biological substance encoded by
	t nucleotide sequence is a metabolite.
the mot nucleotide sequence is a metabolite.	
31.	(Canceled).
~	
32.	(Canceled).
	,

(Original) A mutant of a parent Aspergillus niger strain, comprising a first nucleotide

20.

- 33. (Original) The mutant strain of claim 20, which produces at least 25% less glucoamylase and one or more enzymes selected from the group consisting of acid stable alpha-amylase, neutral alpha-amylase A, and neutral alpha-amylase B, protease, and oxalic acid hydrolase compared to the parent *Aspergillus niger* strain when cultured under identical conditions.
- 34. (Original) The mutant strain of claim 20, which is completely deficient in glucoamylase and at least one enzyme selected from the group consisting of acid stable alpha-amylase, neutral alpha-amylase A, and neutral alpha-amylase B, protease, and oxalic acid hydrolase compared to the parent *Aspergillus niger* strain when cultured under identical conditions.
- 35. (Original) The mutant strain of claim 20, which further comprises a modification of one or more genes which encode a proteolytic activity.
- 36. (Canceled).
- 37. (Original) The mutant strain of claim 20, which further comprises a modification of one or more genes encoding an enzyme selected from the group consisting of a carbohydrase, carboxypeptidase, catalase, cellulase, chitinase, cutinase, cyclodextrin glycosyltransferase, deoxyribonuclease, esterase, galactosidase, beta-galactosidase, glucose oxidase, glucosidase, haloperoxidase, hemicellulase, invertase, isomerase, laccase, ligase, lipase, lyase, mannosidase, oxidase. pectinolytic enzyme, peroxidase, phytase, phenoloxidase, polyphenoloxidase, ribonuclease, transferase, alpha-1,6-transglucosidase, transglutaminase, and xylanase.
- 38. (Original) A method for obtaining a mutant of a parent Aspergillus niger strain, comprising:
- (a) introducing into the parent Aspergillus niger strain a first nucleotide sequence encoding a heterologous biological substance and one or more second nucleotide sequences comprising a modification of glaA and at least one of the genes selected from the group consisting of asa, amyA, amyB, prtT and oah; and
- (b) identifying the mutant strain from step (a) comprising the modified nucleotide sequence, wherein the mutant strain is deficient in the production of glucoamylase and at least one enzyme selected from the group consisting of acid stable alpha-amylase, neutral alpha-

39. (Canceled). 40. (Canceled). 41. (Canceled). 42. (Canceled). 43. (Canceled). 44. (Original) The method of claim 38, wherein the biological substance encoded by the first nucleotide sequence is a biopolymer. 45. (Canceled). 46. (Canceled). 47. (Canceled). 48. (Canceled). 49. (Original) The method of claim 38, wherein the biological substance encoded by the first nucleotide sequence is a metabolite. 50. (Canceled). 51. (Canceled). 52. (Original) The method of claim 38, wherein the mutant strain produces at least 25% less

amylase A, and neutral alpha-amylase B, protease, and oxalic acid hydrolase compared to the

parent Aspergillus niger strain when cultivated under identical conditions.

glucoamylase and one or more enzymes selected from the group consisting of acid stable alpha-amylase, neutral alpha-amylase A, and neutral alpha-amylase B, protease, and oxalic

acid hydrolase compared to the parent *Aspergillus niger* strain when cultured under identical conditions.

- 53. (Original) The method of claim 38, wherein the mutant strain is completely deficient in glucoamylase and one or more enzymes selected from the group consisting of acid stable alpha-amylase, neutral alpha-amylase A, and neutral alpha-amylase B, protease, and oxalic acid hydrolase compared to the parent *Aspergillus niger* strain when cultured under identical conditions.
- 54. (Canceled).
- 55. (Canceled).
- 56. (Canceled).